Home automation

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Recent changes in DTI legislation have opened up new opportunities for remote control systems. It is now possible to automate your house to a level which would have been in the realms of science fiction just a few years ago.

What Is Home Automation?

In its most basic form home automation (or home control) is the controlled, automatic switching on or off of an electrical device within your house your house, garage or garden.

Why would I want to do this? For years people have dreamed of operating everything in the house by remote control. Indeed it was in the early 1970's when Stirling Moss unveiled his 'House of the Future' where even the bath could be run from the bedroom. All these facilities have been readily available to the rich and famous but until recently have remained out of the reach and pocket of most people. Depending on which system of control you decide upon (and yes, you can mix and match) then the possibilities are only limited by your imagination.

Here are a just a few examples of possible applications:

Waking Up There's no need to always be woken up by an ordinary alarm, why not your Hi-Fi, or the television? You can have lights to come on throughout the house, and perhaps switch on heaters before you even set foot out of bed. In fact (as long as you remembered to fill it the night before), you can even boil the kettle before you get to the kitchen!

Leaving home in the morning How many times have you left home wondering if you have turned off all the things you know you should have turned off, but can't remember if you have? One solution is to use an Easy Life Kit and a separate wireless wall switch fixed near the front door of your house. On leaving, just one press of a button can switch all your appliance modules off.

Coming Home in the evening If you always get home at the same time you could pre-program lights, heaters, even music to greet you when you return. With RF remote controls you can automate your garage door to open as you pull on the drive and switch on external lights to escort you into the house. If you want to get really carried away you can even use an X10 telephone transponder, "call" your house and switch things on at whatever time suits you.

In Your Absence You can pre-program lights and radios to switch on and off around your house to give the "lived in" look, and with the right equipment you can even automate curtain opening and closing. You can even hook into your burglar alarm system so that all that house lights flash on and off when an alarm is triggered.

Child Control One customer has used an X10 "Free Time" put an appliance module on the socket in his kids' bedroom. They have a four-way distribution panel plugged into the appliance module into which is plugged the TV, stereo and the games console. At 9 pm the appliance module turns off, and the noise ends. Interestingly, whilst the kids could unplug the distribution board from the appliance module and plug it into the socket (to which their father can retaliate by fitting a DIN-rail switch) in fact, they don't. He meanwhile, isn't faced with having to go in to their rooms and tell them to turn everything off and the nightly showdown that would ensue. What price silence? All he needed was a Free Time Kit.
These are just a few examples, although the possibilities are really endless.

OK, What Do I Need? There are three main types of control method used in Home automation products:

- Timer Control
- Wireless (RF) control
- X10 Control

Further explanation of each is given in the appropriate product section

Home automation – Timer control

Timer control is the simplest of home automation control systems. Basically, timer control consists of inserting a programmable on-off switch into the power supply line of the appliance to be controlled.

The appliance or unit is switched on or off according to the timer settings. All of the control devices listed below can be programmed for up to 10 on/off switches per day, and provide for different settings for each day of the week if required. All feature a large LCD for ease of programming, and have an instant manual override function.

Please note that although the programmable controllers and 13A outlets can be fitted in minutes, installation does require some basic DIY electrical skills.

Remote telephone switch

Want to switch on a light before you get home? Water the lawn whilst you're away? Here's an easy way to control any mains with your telephone. Simply dial in, enter your personal code and the device will switch on for a pre-determined time (1 to 99 hours). You can even check the status by phone. It works in parallel with other telephone devices so won't interfere with your answering machine. Touch telephone required. Max load 10A.

[TSX] £49.99

PLUG IN TIMER

As simple as it gets, just plug this into any 13A socket and plug the device you want controlled into it. (13A max load).

[7DT] £11.99

LIGHT SWITCHES

Easily convert any wall light switch into a programmable 7 day switch. The neat flush design fits on the left or right hand side and can be used with dimmers and fluorescent lights. Ideal for security (make your house look lived in) and for convenience (wake up/come home to a well lit house). It can also be used to automate a single or double mains outlet with a max load of 6A (only for use with flush mount switches and sockets)

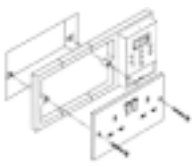
[R1] £29.99

Special price when you buy two [R1PAIR] £44.99

IMMERSION HEATER CONTROLLER

Helps to save electricity with up to seven on/off settings per day plus a countdown (switch off after x minutes) feature. Easy change from summer to winter time (and yes-it IS more economical to switch the immersion than to leave it on all the time!).

[R2] £34.99



PROGRAMMABLE 13A SOCKETS

Easily convert any UK 13A mains outlet into a 7 day programmable electronic timer. Use it to control any mains operated device (eg garden fountain, lights, etc). Contains fittings for single or double outlets (double outlet installation pictured). Max load 13A.

[R3] £34.99

Browse and buy on-line at
www.keene.co.uk

Home automation – Wireless (RF) control

RF controlled automation – put the tools away

Ever wished your light switch was in a different place? Well, now there's an easy solution. Simply remove the light bulb, fit an RF module (standard bayonet or screw fit, and replace the light bulb. Next, decide where you want the switch to be and simply stick it on the wall. Job done!

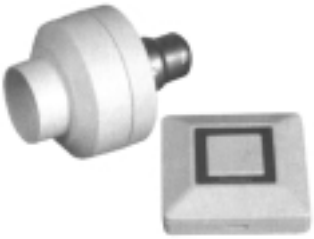
Or how about a door chime? Simply stick the switch on to the door and plug the chime into any mains socket in the house! It really couldn't be any easier.

Light switch (on/off/dim)

Lamp adaptor (bayonet fitting only, max current 200W) and wireless on/off/dim wall switch.

[RF1098] £34.99

Light switch (on/off)



Lamp adaptor (bayonet fitting only, max current 200W) and wireless on/off wall switch.

[RF1087] £29.99

Door chime

Mains powered plug-in chime module and wireless push button type actuator.

[RF1010] £29.99

Home automation – X10 control

X10 transmitters/controllers (things that directly send X10 commands)

Transceiver module

The transceiver module catches the radio signals emitted by any X10 compatible transmitter (eg MS10E, HR10, UNIREM, KR22E, SS13E etc) and converts them into X10 signals for the mains wiring. It simply plugs into the mains wherever you find convenient and looks very much like an appliance module with a small aerial attached. The transceiver module also has an outlet socket and can be used like an appliance module although its address code cannot be altered from address code 1. It has an effective reception range of around 30 metres so normally one (centrally located) transceiver module is enough to ensure that an X10 remote will work more or less anywhere within the house. Max load 5A (resistive) 2A (inductive)

[TM12U] £29.99

Security light and controller

A security light with a difference - this one can also control other X10 devices. In addition to turning on dual floodlights when the detector picks up motion, the Outdoor Motion Monitor can turn on up to four other X10 modules in or around your home. It also includes a light sensor which can switch up to four additional X10 modules at dusk and off again at dawn. It is completely weatherproof and can be used with incandescent or halogen bulbs up to 300W total. The floodlights can also be turned on manually from an X10 transmitter. When turned on manually, the floodlights stay on and the motion detector is temporarily disabled until the floodlights are turned off from an X10 transmitter. The hidden Control Panel allows you to configure all of the X10 settings. Supplied complete with 2 x 120W PAR38 screw type bulbs.

Order code [OMM] £79.99

'Sundowner' X10 controller

A neat X10 controller with tactile switches for up to 8 X10 addresses, giving you on, off, dim, brighten plus a very useful "all units off" and "all lights on" button. This unit also features a light sensor such that up to four X10 addresses may be set to come on and dusk and off at dawn. A rotary sensitivity control allows you to fine tune the sensor to its location.

Order code [SD7233] £29.99

What is X10?

X10 is a communication protocol for remote control of mains electrical devices. It works by passing control signals through your existing mains wiring. There are two essential parts to an X10 installation; a transmitter and a receiver. The transmitter generates the control signal ('switch on', 'switch off', 'brighten' or 'dim') and these signals are acted upon by receiver modules connected to the mains within the house.

In essence, X10 allows you to assign a unique "address" to every electrical item you want controlled. Commands can then be sent to each particular address, allowing items to be turned on and off, (or dimmed) as required. There are a number of different ways to send a command to an "address", either by a timer, remote control, computer control, wall switch or even by telephone. You can have up to 256 unique addresses per house, and of course some devices can be set to the same address so that one command can switch them all on or all off at the same time. You can buy individual modules to build a system, or buy a starter kit to get you going. Because X10 uses your existing house wiring there are no extra cables to run and the beauty of the system is that you can expand it almost endlessly.

Most of the X10 products require no DIY skills at all, you just plug the devices in and start using them. A few of the products (wall switches etc) do require some basic electrical DIY skills for safe installation and operation. (As ever, if you're in doubt please consult a qualified electrician.)

Powerlash Universal Interface

A really interesting product, this unit monitors a pair of normally open contacts and sends X10 commands when it detects a change. This can be triggered by closure of the contacts, or even a low voltage (6-18V AC, DC or speaker level audio).

There are three modes of operation:

Mode 1: it sends ALL LIGHTS ON to the house code plus and appliance ON to the same address the interface is set to. When the contacts are opened it sends an OFF command to the appliance but leaves the lights ON.

Mode 2: it sends and ALL LIGHTS ON/OFF flashing command and leaves them ON after the contacts are opened.

Mode 3: it sends an ON command to one address, and an OFF to the same address when the contacts are opened again.

There are many uses for this device. For example;
Connect it to your burglar alarm panel and have all your house lights flashing on and off in an alarm condition.
Connect it to a magnetic switch to turn on lights when a door opens.
Connect it to your doorbell to trigger lights, sirens or whatever you like.

If you like to experiment with electronics you can cause trigger conditions using lights sensors, moisture sensors, microphones etc.

[SM10E] £34.99

Mini timer

* As easy to program as an alarm clock
* 4 timers with two schedules each per day
* Manual 15 min delay feature
* 8 device keypad with "All On" & "All Off"

The mini timer resembles a conventional alarm clock with an LED time display and control buttons along the top, and enables you to send manual commands to X10 addresses 1 to 8. It can send two 'on' and two 'off' timed commands to each of unit addresses 1 to 4 or 5 to 8 which can either be set to precise times or to vary within 30 minutes of a set time. There is an alarm function on either address 1 or 5 which activates a buzzer as well as sending a command. There is a 'sleep' function which can be used to send 'on' or 'off' commands at any time from 15 minutes to over 8 hours ahead. An additional feature is a button which will send an immediate 'on' command to all lights set to the same house code (whether via a lamp module or a wall dimmer switch). There is also an 'all units off' function allowing a command to be sent instructing everything connected to the house code to switch to the 'off' position. The mini timer sends its own commands to modules and switches and there may also be other signalling devices which you may wish to use. As with all of the X10 equipment, the mini timer works with a house code and a unit code which can be easily changed at any time. More than one mini timer can be used through the use of the house code system. For example, there might be a circuit controlling, say, some lights and some appliances which could be designated as circuit A and controlled by remote controllers set to circuit A. Another completely separate circuit could operate within the home, controlling another grouping of devices. There will be no interference between those circuits and up to 16 circuits can exist at once. UK mains adaptor included.

[MT7222] £27.99

Computer interface

Consists of the programmable X10 transmitter module and PC software. Use your PC to program the module with timed commands as required. The module then works stand-alone even when the PC is switched off. The module plugs into a 13 amp socket and will send and receive commands across the house circuit. Signals may be received from one or more commanders (i.e. transceiver modules, timers or any other combinations),and are sent to be dealt with by receiver modules (appliance or lamp switches, etc). The computer interface module can send complex commands to any module or switch. Unlike some of the other devices it can address items across all house and unit codes and so can control up to 256 different addresses. In addition command groups can be set which have sequences (i.e. A3 - turn on; B5 - go to half way; C6 - turn on and then turn off after two minutes) and which can be triggered via signals sent by a transceiver (actioned by a user pressing a remote control button) or by a timer, or actioned via a programmed sequence. Full functionality is programmed using the software supplied, allowing any address to receive a command at intervals of not less than one minute. The programme is downloaded to the computer interface module via a serial cable (included). The computer interface module has its own battery back-up power supply and will retain all of the programming indefinitely as long as the power socket is switched on, and for up to seven days in the event of a power failure or if the socket is switched off. Thus the computer interface module can be programmed and then taken to a different location for use (for example by an elderly relative who has no PC, or perhaps at a second home). The software is user friendly, operates under the Windows environment and is continually updated. (A MAC version is available, although not supplied). Note - the power socket into which it is plugged must always be switched on.

[CM11U] £49.99

IR Command Centre

This unit lets you use an infra-red remote to control X10 modules. It is designed to be used with the universal X10 remote although of course you could also use this remote to "teach" any compatible learning remote such as the Pronto or Marantz RC5000 etc. As well as IR operation it also has its own keypad for direct push button control of up to eight devices.

[IR7243] £34.99

Telephone Base Station

An improved and updated X10 telephone responder TR7251, the SC2800 now adds an excellent range of home security options in addition to telephone appliance control. Once configured you can dial into your house from anywhere in the world and switch on or off any X10 controlled appliance. Not only that, the SC2800 provides some serious capability for home security. It's capable of monitoring up to 16 wireless sensors, and, in the event of an alarm condition (ie a trigger on one of these sensors) it can be set to automatically dial out (on up to four different telephone numbers) and playback any message you've pre-recorded. The SC2800 contains a built in siren and can also trigger any other external X10 controlled lights and sirens. Since all the alarm sensors are wireless it makes for very easy installation yet provides a powerful and flexible alarm system with full X10 integration and telephone control. It also acts an X10 transceiver module (the base station on its own provides telephone control and X10 push button control), and is compatible with the DM210 thermostats. All in all a great X10 product.

Order code [SC2800] £89.99

Also available (with other components) as part of the MS9700 security kit.

Wireless (RF) transmitters (things that send RF commands to be translated into X10)

To be used in conjunction with the TM12U transceiver module,SC2800 Telephone Base Station etc which converts the RF into X10 commands

RF transmitter modules for use with the SC2800 Telephone Base Station

See SC2800 details above Also available (with other components) as part of the MS9700 security kit.

KR21E Key Fob remote (for easy arm/disarm)

[KR21E] £29.99

SM600 remote control (for full remote system control)

[SM600] £24.99

GB10E glass break sensor

[GB10E] £34.99

DS10E Door/window sensor

[DS10E] £29.99

MS10E PIR motion sensor

[MS10E] £49.99

Universal remote control

A multi-device remote control that can replace the IR remotes for up to seven other devices, It has a built in code library for all popular brands as well as a learning facility. Not only can it do all this, but it is also works as an X10 wireless (RF). transmitter When used with the TM12U transceiver module you can directly control up to 16 different X10 addresses with on/off and dim/bright. There's also an "all lights on" button which sends an immediate 'on' command to all lights set to the same house code (whether via a lamp module or a wall dimmer switch), particularly useful if there is a suspected intruder or one of those annoying 'bumps in the night'. There is also an 'all units off' function instructing everything connected to the house code to switch to the 'off' position. Powered by AAA batteries. Very simple and very useful.

Note, for X10 use TM12U transceiver module required

[UNIREM] £24.99

'Hawkeye' PIR occupancy detector

This is a PIR (passive infra-red) sensor which can send signals to a transceiver module via radio. The device is powered by AAA batteries and may be used internally or externally. When the infra-red sensor detects movement a signal can be sent to any of unit addresses 1 to 15 within the house code to which the occupancy sensor is set. An additional dusk/dawn detection can send a signal to a unit code address one number higher than that sent by the infra-red detection. The infra-red and dusk/dawn facilities can be programmed via 'if/then' events to make this unit a complex addition to a Home Automation system. For instance it could be used in a typical room setting such that if it is dark then a person entering would automatically trigger a sequence turning on lights whereas that sequence would not be triggered if it were light. It is of particular value when used in conjunction with a computer interface module. If needed, it can also send a reversing signal if there is no further triggering within a period which can be set from 1 to 128 minutes.

There are many uses for this device - for example you wouldn't need to remind the children to turn off the lights when they've left their room, it would happen automatically. End the search for a light switch in the dark, or use it to trigger all the house lights to come on if you get an unexpected visitor at night.

Key applications
*Save energy by turning off lights and appliances when you're not in the room
*Protect your home by early warning of unexpected visitors
*Activate lighting sequences

Note: TM12U transceiver module required

[MS13E] £34.99

XCAM HOMEVISION

An interesting product, the XCAM Homevision provides internet video monitoring for a remarkably low price. The package contains a USB video adaptor and some very clever XRAY Vision software. Use the video adaptor to connect any camera source (composite connection) say a camcorder, security camera or XCAM to your PC and install the supplied server software. Once installed the software automatically uploads images to a password protected XRAY server site. You, (or anyone else you provide the password to), can then view these images from anywhere in the world. The software provides some amazing flexibility:

Choose how often to grab an image from every 5 seconds to every 10 minutes

Upload the images to the XRAY server site at pre-determined intervals

Optionally send the images to several pre-selected e-mail addresses

Or you can watch at any time what your camera captures

Use the ftp facility to automatically upload new images to your own web-cam web site

Use the security mode to email an image whenever motion is detected

Save the images to your database with several user definable preferences - based on fixed times, delay, motion or when you ask it

Use it for peace of mind and remote monitoring of home or work when you're not there, or to provide a regularly updated image for your website.

[XCAMHV] £64.99

Remote control

An easy to use remote control, about the size of a cigarette packet. Can be used hand held, or attached to a wall. It can send an 'on' or an 'off' command to each of addresses 1 to 8 or 9 to 16 on a particular house code. In addition it allows a dim up or down to be carried out (which will be interpreted by a module or switch with dimming capability and will not affect any other item). RF signalling means that it does not have to be pointed at the unit to be controlled, but must be used in conjunction with the TM12U transceiver module, set to the same house code. The effective range is up to 30 metres., usually enough for the remote to address any item connected to the system form anywhere in the house. A small LED (which also acts as a battery indicator) illuminates when a signal is sent. Powered by AAA batteries. The combination of a remote control and transceiver being used to activate command groups set up by a computer interface model is extremely powerful and allows the user to take a high degree of control over electrical items in the home. More than one remote control can be used to send signals to a transceiver module and in practise many users find that one upstairs and one downstairs is often a sensible configuration.

Note: TM12U transceiver module required

[HR10] £24.99

SUPER SLIM 4 CHANNEL REMOTE KR22

KEY Features:
• 4 Channel RF remote for controlling up to 4 X10 modules
• ON / OFF functions + DIM/BRIGHT
• Very slim design
• Batteries: 2x CR2016, 3V lithium (included)
• RF frequency: 433.92 MHz
• RF operating range: 15-25 m (open field)
• Default settings for house code A, unit code 1-4 (can be altered if desired)

[KR22E] £24.99

TM12U transceiver module required

EASYTOUCH 35 X10 REMOTE CONTROL

A new touchscreen remote control that supports X10 commands plus up to 7 other AV devices. When a device is selected, only the keys relevant to that device are displayed making operation very simple. The remote transmits both IR and RF (radio) signals. This means that in X10 mode it can send commands to a Transceiver module (TM12/TM13) and also control your other Av devices from around the house via an (optional) Powermid receiver. The remote comes with a built in extensive library of IR codes for all common makes & models and also has a learning mode. (note – it does not support IRDA as used by some digital cable boxes or high frequency IR as used by B & O equipment). The RF range is 30 metres (line of sight) or up to 20 metres through walls.
• Easy control: only the functions for the device selected are shown on screen
• Universal remote control for 8 devices (TVs, VCRs, CD players, satellite receivers, decoders, DVD players, audio systems and X-10 Home Automation)
• Easy setup: Preprogrammed for nearly every brand and model
• Touchscreen can be configured to your individual needs
• Home Theatre Macro function: Set all your devices with one press of a button
• Backlit Screen for use in the dark
• Supports ShowView, VideoPlus, menu control and timer access to program your VCR
• Flashing LED and sound signal (can be disabled) to acknowledge commands.
• Prepared for the future: extensive learning memory for future devices
• All Power Off: Switch off all your devices in one go

Specification:
Power: 4x AAA batteries (not included)
IR range: up to 8 metres
RF transmission frequency: 433MHz
RF range: up to 20 meters through walls and ceilings
Learning memory: Maximum of 320 commands, 40 keys per mode
Macros: 9 Macro keys, 20 commands per Macro key
User manual: Four languages: English, Dutch,German and French
Dimensions remote control: 185 x 60 x 25mm (h x w x d)
Dimensions box: 305 x 185 x 45 mm (h x w x d)

Order code [ET35] £59.99

Wireless (RF) transmitters (continued)

Wireless wall switch

A wireless switch that can be stuck or screwed to the wall and gives you control of two X10 addresses. Ideal for controlling appliance modules and appliance wall switches (note no dim/brighten facility). This is radio based so you must have an TM12U transceiver somewhere in your X10 system. *Requires 4 x AAA batteries (not included)*

[RW8184] £29.99

Slimline stick-on wireless wall switch

A really thin (less than 5mm thick) light-weight switch that can be attached to any wall in seconds, giving you instant convenient control of up to three X10 addresses. It sends commands to a transceiver module by radio frequency to any consecutive group of 3 unit codes within the same house circuit setting and also has the dim up and dim down facility. It is of particular use where a user may wish to be able to control lighting or appliances in a room from a static location and where the existing wiring is insufficient to support a wall dimmer switch or a wall appliance switch. It can also be of great benefit when much more functionality is required in a home and where the expense of a conventional wiring alternative would be prohibitive. Like all other Home Control products it can be used to activate sequences managed by a computer interface module. Because it is battery operated, it may be used safely where conventional wiring may be hazardous, for example in close proximity to water. (*note: unit itself not water resistant*)

[SS13E] £29.99

DIGIMAX 210 X10 THERMOSTAT

The Digimax 210 is a wireless room thermostat that communicates with the SC2800 base station. Simply stick it on the wall, set it to the desired temperature and it will communicate with the base station, triggering an X10 on or off command as the temperature rises or falls. Use it with any heater plugged into an appliance module, or with a bit of ingenuity (and probably some help from a heating engineer) you could achieve X10 control of your gas central heating system. Using the telephone integration features of the SC2800 you could even call ahead and have your house brought up to temperature ready for when you arrive. (note that the Digimax 210 can only communicate via an SC2800 - it does not issue X10 commands directly)

TECHNICAL DATA
Size : 80 x 80 x 25mm
Operating temperature range: 5°C to 35°C in 1° steps
Differential: <1°C at 4°C per hour
Ambient temp range: 0°C to 45° C
Power supply: 2 x AA batteries (not supplied)
Battery life: 2 years typical
RF frequency: 433.92 MHz
RF range: 30 metres (free air)
Approval: CE approved

[DM210] £34.99

Visitors are welcome at our showroom/warehouse. We have full demonstration facilities – why not try before you buy? Monday–Friday 9.00am–5.30pm, Saturday 9.00am–5.00pm

X10 receivers (things that act on receiving an X10 command)

New X10 MicroModules

A great addition to the X10 range, these are very tiny modules that are designed to be concealed behind existing wall sockets and switches.

AW12 MicroModule

A miniature appliance module that can be concealed behind an existing wall socket to turn it into an X10 controlled wall socket. It can also be wired to an external switch (momentary or latching) for direct control. A neutral wire is required for operation. When used with a momentary switch the relay will operate each time the switch is pressed. When used with a latching switch the relay will operate on both the closure and release. This means two-way switching is possible if 2 changeover latching switches are connected in series.

Technical data: Supply voltage: 230V +10% -15% 50Hz, Supply current: <20 mA capacitive. Max capacity: 2000W (incandescent lamp), 3A (motors), 16A (resistive

[AW12] £49.99

AWM2 MicroModule

A miniature X10 transmitter for two addresses with built in 16A appliance module. It can be used to turn a conventional switch (momentary or latching) into an X10 transmitter. If for example the 1st switch is set to address A10 then the relay will respond to an incoming command for A10. If the switch is used it will switch the relay and also send an X10 command to any other modules set to A10. Switch 2 only transmits an ON/OFF command for the configured address plus one – in our example A11. The module dimensions are just 46 x 46 x 16mm.

[AWM2] £79.99

TMA4 MicroModule

A miniature X10 Transmitter for 4 addresses and the commands ON and OFF. The TMA4 connects up to four conventional (latching) switches by wire leads and transmits up to four sequential X10 ON/OFF addresses. MicroModules use two-way X-10 communication. Marmitek MicroModules are designed to fit in the rear of European junction boxes, behind any installed switch or outlet. The module dimensions are just 46 x 46 x 16mm.

[TMA4] £79.99

TMD4 MicroModule

Essentially the same as the TMA4 although it also sends DIM/BRIGHTEN X10 commands, and can be used with momentary action switches only. The dimensions are the same at just 46 x 46 x 16mm

[TMD4] £79.99

SW10 Shutter Switch

Switch for sun blinds, roman blinds, curtains and other window coverings using a 230V motor. Intelligent switch with memory for window size and present position. Remote control using the X10 protocol. With X10 control the blinds can be set in any position. Manual control is also possible. The X10 Shutter Switch can be built into a standard 50mm Shuko back box. The switch can be controlled remotely via the mains using X10 signals. This means the Marmitek X-10 system can be built into the installation and is totally 'invisible'. The switch can also be controlled manually as a momentary switch. The blinds can be set in any position manually.

When installing the switch, the size of the window is set. This information is stored in memory and will be retained even in the event of a power failure. This also applies to the actual position of the sun blind. The blinds can be remotely controlled using the following X10 Commands:

- Fully open in response to the command 'On'
- Fully closed in response to the command 'Off'
- Any desired setting in response to the command 'Dim'.

Phase and neutral have to be available before the module can be installed.

[SW10] £49.99

Data sheets available on request or from www.keene.co.uk as pdfs

X10 receivers (things that act on receiving an X10 command)

Appliance module

Simplicity itself, just unplug the device you want controlled, plug this into the socket then plug the device back in. Set the X10 address as needed and you now have instant X10 control. The module can switch on or off an appliance of up to 13 amps, ideal for kettles, fans, heaters, lamps, etc. The appliance module has an added feature in that if the item connected to it is desired to be manually controlled without having to send a signal to it, the appliance module will switch to the 'on' position by a simple turning 'off' and 'on' of the appliance. The module itself will only turn off if a signal is sent to it.Max load 16A (resistive) 1A (inductive).

[AM12U] £24.99

Multi-buy deal on 5 appliance modules £105.00

Wired appliance module

Essentially an AM12 appliance module with the plug part chopped off. This version is more compact allowing for direct connection to your chosen appliance. Ideal for discreet (built) in applications where you'd rather not have the AM12 module in the wall socket, and also for appliances that are hard wired.

[AM12W] £24.99

Lamp module

Gives you instant X10 control of any plug in lamp. Plugs into a 13 amp socket and will switch on/off lamps plugged into the module's standard 3 pin socket. In addition it can dim/brighten (standard tungsten or halogen filament bulbs only, NOT fluorescent). More than one lamp may be connected to a lamp module but can not be controlled independently. If a lamp connected to the module is desired to be manually rather than X10 controlled, the lamp module will switch to the 'on' position by a simple turning 'off' and 'on' of the lamp switch. The module itself will only turn off if a signal is sent to it. In some cases, where lights have transformers or their own dimmer systems, there may be a conflict with X10 dimmer commands in which case an appliance module would be more appropriate. Load 40W (minimum) 300W (max) incandescent lamps only.

[LM12U] £24.99

Multi-buy deal on 5 lamp modules £105.00

Wired lamp module

Essentially an LM12 lamp module with the plug part chopped off. This version is more compact allowing for direct connection to your lights and can be built into ceilings and partitioned walls etc. Identical to the LM12U in specification and operation

[LM12W] £24.99

X10 bayonet lamp module

Probably the easiest way to achieve X10 control of a lamp - simply remove the bulb, plug in the module and then replace the bulb - that's it! The lamp will now respond to on/off X10 commands (not dim or brighten) and can still be operated with your conventional light switch. Very nifty. Note, the light switch must be left "on" before X10 can assume control. 150W max incandescent tungsten lamps only. 70mm long.

[LM15EB] £19.99

Multi-buy deal on 5 bayonet fit lamp modules £110.00

Appliance wall switch

The wall appliance switch is the same size and fits in the same way as a standard UK single gang appliance switch. It is designed to replace existing appliance switches and to offer control over those appliances through our signalling system (for instance, control a washing machine that at present is plugged into a switched wall socket). The wall appliance switch is also a suitable command tool for fluorescent lights, which the wall dimmer switch can not handle. It can control appliances of up to 10 amps and is specifically designed to be a double pole single throw switch, that is, it switches both the live and the neutral. (Most light switches have only the live or neutral present but not both and so our switch cannot be used under those circumstances - if in doubt you should consult an electrician.) More than one appliance may be connected to a wall appliance switch but they can not be controlled independently. The wall appliance switch receives signals via the electricity supply whether the switch itself is on or off and has a light to indicate whether it is on or off. However, if the appliance has a switch then it must be in the 'on' position for our wall appliance switch to be able to control it. As with all X10 equipment, the wall appliance switch can be simply programmed with an address so that when signals are sent to it, it can react. Once the switch is fitted, the address can be changed without removing the switch. Max load 10A (resistive) 3A (inductive).

[AW10U] £34.99

Wall dimmer switch

Just replace your standard wall light switch with this wall dimmer switch for instant X10 control. It is the same size and fits in the same way as a standard UK single gang light switch, and is designed to provide control over the lights through X10 signalling. In addition to turning 'on' and 'off', it can dim down or up. The wall dimmer switch receives signals via the electricity supply whether the switch itself is on or off. However, if the light fitting has a switch then it must be in the 'on' position. As with all X10 equipment, the wall dimmer switch can be simply programmed with an address so that when signals are sent to it, it can react to appropriate commands. Once the switch is fitted, the address can be changed without having to remove the switch.

Notes: For use only with standard tungsten or halogen lamps, NOT fluorescent. Does not support two-way switching. More than one light may be connected to a wall dimmer switch but multiple lights will not be independently controllable. Please see our notes on low voltage lighting. Load 60W (minimum) 300W (max) incandescent lamps only.

[LW10U] £34.99

X10 compatible low voltage transformer

For those of you that would like to have X10 control of your existing low voltage (12V) halogen lighting we've sourced some high quality replacement transformers. They're fully compatible with X10 and once fitted you can use an LD10 or LW10 for X10 on off and dim/brighten commands. The transformers are very well made with low operating noise and are self resetting with inbuilt short circuit and overload protection. For ease of connection each unit has two pairs of input terminals and two pairs of output terminals. Output rating 105VA (say 5 x 20W bulbs)

[P105] £12.99

Plug in filter

If a particular appliance causes interference that affects your X10 commands, simply unplug it and plug in again via this filter. It prevents any unwanted "noise" from the appliance entering the ring main.

[FM10] £29.99

Our telephone order hotline is **0870 990 9000**. Order any time – no answering machines, talk to real people 24 hours a day, 365 days a year

X10 receivers (continued)

Universal relay module

Another interesting gadget, this unit contains an X10 controlled beeper and a pair of normally open isolated contacts. It can be set to operate as a beeper only, a contact relay only, or both. The isolated contacts can be set for momentary or sustained closure and can switch up to 5A at 24v DC (30v AC at 5A). When set for momentary operation the contacts, close and then open again after about two seconds. In this mode, OFF commands are ignored. In continuous mode it closes the contacts on receipt of an ON signal and opens them again when it receives an OFF (or ALL OFF) signal. Think of it as an X10 controlled heavy duty switch, ideal for use in electronic projects eg door/window openers, watering systems, thermostats, etc.

[UM7206] £34.99

X10 addressable power supply

Plugs into a standard (UK) 240V 13A mains outlet, provides an X10 on/off switchable DC power supply (12V 100mA) via a 2m cable. The device is intelligent in that it automatically switches off whenever it detects an "on" command for any other address on the same X10 circuit

[XM11U] £19.99

Also available as part of the XCAM2 wireless video camera surveillance kits

USING X10 WITH LOW VOLTAGE & ENERGY SAVING LIGHTING

There are a few important points to remember here

Low voltage lighting

12V halogen lighting systems usually use one of two different type of transformer; a lightweight electronic (switch-mode) unit, or a heavier conventional transformer. The heavy transformer type can be safely operated and dimmed with an X10 module (LD10 or LM12U). The smaller switch-mode type cannot be dimmed by X10 and it may result in damage if you try. The only solution (if you require X10 dimming) is to change the transformer for a conventional type. If you only require on/off control without the dimming option then an AD10, AW10 or AM12U will be fine.

X10 Product quick compatibility checklist

[LD10] DIN RAIL DIMMER: OK for conventional incandescent lights (60-700W, and mains voltage halogen lights. Can also be used with low voltage halogen provided the transformer is NOT switch-mode type. Requires momentary action switch.

[AD10] DIN RAIL SWITCHER: OK for on/off control of almost any type of light or appliance up to 3kW.

[AW10U] WALL APPLIANCE SWITCH: OK for on/off control of almost any type of light or appliance up to 2kW. (requires neutral connection)

[LW10U] WALL LIGHT SWITCH: Replaces conventional light switch for on/off and dim/brighten control. Cannot be used with energy saver type lamps or low voltage halogen systems. Does not require a neutral connection so will replace existing light switches easily. Minimum (yes minimum!) rating 60W, max 300W

[LM12U] PLUG IN LAMP MODULE: On/off and dim/brighten control of conventional lamps only (max 300W) - not for use with energy saver or low voltage lighting.

[AM12U] PLUG IN APPLIANCE MODULE: OK for on/off control of almost any type of light or appliance up to 13A.

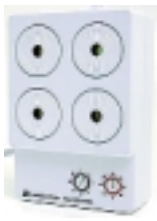
[LM15] BAYONET FIT X10 MODULE: For use with conventional (100W max) filament bulbs only, not for use with energy saver or fluorescent bulbs. Provides on/off only (not dimmable).

What on earth is an "inductive" or "resistive" load?

A resistive load is, as you'd expect, purely resistive and has nothing else that affects its power requirements. For example appliances with resistive loads include; toasters, electric fires, electric ovens, kettles, conventional filament type lamps, etc.

In electrical terms an "inductor" is a number of turns of wire wrapped around a core and "inductance" is the ability of this coil to store energy. It follows that an inductive load is something which contains coils, usually in the form of motors, solenoids or relays. Inductive loads usually require more power when they first start up than they do to continue running. For example, appliances with inductive loads include; power tools, washing machines, spin dryers, high powered amplifiers, arc welders, fridge/freezers and anything else likely to have lots of coils in it....

X10 Siren



A very loud (105db) siren. Simply plug in and set to the appropriate X10 address. Great for adding security functions to items like the MS13E Hawkeye sensor.

[PH7208] £54.99

X10 PROFESSIONAL RANGE

The majority of X10 home automation products are designed to be easy to install "plug and play" types that anyone can set-up and use. There are however a few devices classed as "professional" because they require installation by someone competent with domestic house wiring. Given that they need a bit more difficult to fit, they do offer an extra degree of flexibility. Classed as "DIN rail" products (because they fit directly onto the DIN rail within most modern consumer units), they can also be fitted into their own special housing adjacent to your consumer unit.

AD10 DIN RAIL SWITCH

Basically a remote controlled relay, this can be directly controlled either by switches (momentary or latching) or by any other X10 controller. This makes it useful for say hallway lighting applications, and also with its 16A load capability its great for items like immersion heaters. Very useful.

[AD10] £34.99

LD10 (LD11) DIN RAIL DIMMER

These are designed to fit into a std DIN rail consumer unit or similar enclosure and give you all the benefits of X10 direct from the fusebox. The LD10 supports on/off and dim/brighten. Additionally they support a 'soft start'. In effect when you operate your light switch your lights will start from zero and gradually brighten until they reach the last remembered level. Then If you press and hold the light switch they will gradually cycle through to maximum brightness and then back to dim. Whenever you release the switch this sets the remembered level of brightness for the next 'on' command. Very ease to install and use, they can be controlled by any X10 controller and also by a momentary action (non-latching) switch. Max load 60–700W.

[LD10] £34.99

DIN rail module enclosures

Ideal for housing the X10 DIN rail Appliance and Dimmer modules; these are ideal if you're tight for space within your existing consumer unit, or you wish to site them elsewhere.

INTERNAL ENCLOSURE for 3 standard size DIN modules, or 1 LD10 or AD10. Enclosure features a hinged clear lid. DIN rail length 100mm, overall dimensions 157 x 70 x 64mm.

[DRE3] £6.99

INTERNAL/EXTERNAL ENCLOSURE for up to 3 standard size DIN modules, or 1 LD10 or AD10. Features hinged clear lid with weatherproof seal. DIN rail length 100mm, overall dimensions 131 x 73 x 91mm.

[DRE3E] £16.99

DIN rail filter

Can be used as a coupler, to allow X10 signals to be passed between phases in a multi-phase installation, and can also be used as a filter. In filter mode it can be used to prevent X10 signals from entering or leaving the building (in the case of interference from a neighbour), or to filter a specific load from the consumer unit. Suitable for heavy duty loads up to 63A.

[FD10] £34.99

X10 kits

XCAM2 X10 WIRELESS VIDEO CAMERA surveillance kits

The XCAM2 (top) is a tiny colour video camera (with audio) that transmits its AV output as an RF signal to a receiver (bottom) up to 30m away. The easy way to add camera surveillance to your home or office. Simply fasten the camera to the wall and connect to any suitable power supply. Then connect the video and audio outputs from the receiver to your VCR or TV, switch on and watch! Great for security, baby monitoring etc.

Where does the "X10" bit come in?
You don't have to have X10 to make use of the camera, it works perfectly well straight out of the box, but if you do have X10 it makes it easier to control additional cameras. The special X10 controllable camera power supply (XM11U) can be set to a specific X10 address, meaning you could have several cameras in different locations, each with its own unique X10 address and then switch them on and off as required with an X10 controller. The supply is also intelligent in that it automatically switches off whenever it detects an "on" command for any other address on the same x10 circuit. This means you can easily scan via X10 by simply switching the "on" command for the camera you want without worrying about first switching any of the others off.
Can the camera be located outside? Yes, although ideally it should be sheltered, eg inside a porch or under the soffits. The camera base can be screwed to a wall or mounted on a tripod. The X10 supply cable supply is 2m long, coupling to a further 2m cable on the camera itself.

SPECIFICATIONS:

CAMERA: Single chip CMOS, 1/3" format with 307k active pixels. On chip auto exposure, automatic gain control, auto white balance. Moulding in plastic, splash proof to IP53

Viewing angle 40 degrees; Light sensitivity 100 lux; Power 12v DC; Transmitter frequency 4 channel selectable 2.411GHz, 2.434GHZ, 2.453GHz, 2.473GHz; RF range up to 30m

RECEIVER: Power 12v DC; Frequency 4 channel selectable as per camera; AV output 1 x RCA phono composite video 1v p-p, 1 x RCA phono audio 1v p-p; Dimensions 153 x 100 x 140mm

Starter kit consists of one camera, one XM11U X10 controllable power supply, one receiver with mains supply, scart and phono cables.

[XCAM2] £69.99

Additional camera and XM11U X10 controllable power supply as included in XCAM2 starter kit

[XCAM2C] £59.99

Kit consisting of one XCAM2 plus two additional cameras (three cameras in total). Choose this option if you want multiple cameras and already own some X10 equipment to switch with. Save £14.98 over individual prices.

[XCAMKIT] £249.99

Extended kit consists of the XCAMKIT above plus 1 x TM12U transceiver Module plus 1 x HR10 remote control. Choose this option if you want multiple cameras and don't already own any X10 equipment. Save £19.98 over individual prices.

[XCAMKIT2] £299.99

X10 Security kits

MS9700 security kit

Contains (price if bought separately £404.92 - save ££££s!)
1 x SC2800 Telephone Base Station
1 x KR21E Key Fob remote
2 x DS10E door/window sensor
1 x MS10E motion sensor
1 x SM600 remote control
1 x LM12U lamp module

Order Code [MS9700] Total kit price £249.99

Pan & tilt base for XCAM2

An ideal accessory for your XCam2, the Robocam is a motorised platform that allows you to sweep your Xcam2 left to right and up or down, (240° x 130°). With the remote control you can position the camera to monitor whatever you want and store up to 4 positions to "sweep" in memory. The system is expandable as the single remote lets you control up to 4 Robocams or scan each of them so as to display the image from each camera in turn on your TV.

PLEASE NOTE!

The Robocam base contains a radio receiver so that it can respond to the included remote control, but to control multiple cameras you will need an ADDITIONAL transceiver module TM12U set to the same house code. Please also note that the RoboCam does NOT include an XCam2 camera, you must buy this separately.

[ROBOCAM] £149.99

LK15 starter kit

An X10 kit consisting of 1 x LM15 bayonet lamp module, 1 TM13 Transceiver module (which also acts as a 1KW appliance module) and 1 x KR22 slim keychain remote control. The remote supports up to four different addresses making it easy to expand the system with extra light or appliance modules.

[LK15] £39.99

Pronto/RC5000 X10 STARTER PACK

When used in conjunction with an X10 receiver, the Pronto/RC5000 can be used to turn electrical appliances on and off and even dim/brighten* the lights throughout your house! Now you can have complete control of your home as well as your Home Theatre. All you need is:
•A Pronto or RC5000 remote control
•An IR Commander (that turns the IR signal into X10 commands)
•A lamp/appliance module (that responds to the X10 commands)
•The X10 Infra red codes (provided by Keene as a CCF file on CD)

How does it all work? It's easy - just unplug a lamp from the wall, plug in a lamp module then plug the lamp back in. Plug the IR commander in wherever its convenient (within line of sight of your favourite armchair!) and then use your remote to switch your lamp on/off and make it dim* or brighten* at will. With this system you can control an unlimited number of lamps and other appliances. Additional modules and X10 controllers can easily be added at any stage in the future.
*Any type of lamp can be turned on and off (as can any mains appliance) but the dim/brighten command can only be used on lamps with conventional tungsten bulbs. Fluorescent energy saver type bulbs and low voltage halogen bulbs cannot be dimmed with this system.

How much is it? The normal prices are: IR Command centre [IR7243] £39.99, Lamp Module [LM12U] £24.99 each, Appliance module [AM12U] £24.99 each. However, buy this special X10 remote starter package for all Pronto/RC5000 users for just £79.00 (£67.23 ex VAT)

Order code [X10RP] £79.00

Security kit components: RF transmitter modules for use with the SC2800 Telephone Base Station

KR21E Key Fob remote (for easy arm/disarm)
[KR21E] £29.99

SM600 remote control (for full remote system control)
[SM600] £24.99

DS10E Door/window sensor
[DS10E]£29.99

GB10E glass break sensor
[GB10E] £34.99

MS10E PIR motion sensor
[MS10E] £49.99